REMARKS:

In the outstanding Office Action, claims 1-19 were allowed and claims 20-24 were rejected. Claims 20 and 23 have been amended for clarification. Thus, claims 1-24 are pending and under consideration. No new matter has been added. The rejections are traversed below.

ALLOWABLE SUBJECT MATTER:

At page 3 of the outstanding Office Action, the Examiner has allowed claims 1-19. Therefore, discussion of the cited reference set forth below is directed to claims 20-24.

REJECTION UNDER 35 U.S.C. §103(a):

At item 2 of the outstanding Office Action, claims 20-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent No. JP 10011490 A ('490).

'490 discusses a computer-aided design (CAD) support apparatus where shape information associated with 2-dimensional CAD apparatus and shape information associated with a 3-dimensional CAD apparatus are linked by a database for outputting the shape information to a 3-dimensionaol design support unit based on indication from a 2-dimensional design support unit.

The present invention discloses A CAD system and method for processing a two-dimensional design plane/three-dimensional design space configured by referring to another two-dimensional design plane/three-dimensional design space.

The Examiner compares the '490 apparatus directed to linking data associated with 2-dimensional CAD and 3-dimensional CAD apparatuses via a database with the present invention. In '490, a database (2) is provided for storing specification information and shape information related to a design object (see, paragraph 1 on page 1 of '490). The database (2) is connected to a 2-dimensional design support unit (1) and a 3-dimensional design support unit (3) for outputting the shape information to the 3-dimensionaol design support unit (3) based on indication from the 2-dimensional design support unit (1) (see, paragraphs 1 and 2 on page 1 and FIG. 2 of '490). This means that the '490 is limited to use of data produced by the 2-dimensional design support unit by the 3-dimensional design support unit where data corresponding to a specified component is searched in the database (2) when the component is specified using the 2-dimensional support unit and passed to the 3-dimensional support unit for generating data representing a 3-dimensional shape at the 3-dimensional support unit.

The present invention manages inter-model correspondence and inter-model reference

among 2-dimensional and 3-dimensional design plane/space. As recited in claims 20 and 23, the present invention includes, "managing correspondence between a two-dimensional design plane and a three-dimensional design space for the same target" and "managing reference between models configured by a two-dimensional design plane and a three-dimensional design space for the same target". This allows a 3-dimensional model to be *automatically* assembled, thereby allowing spatial relations in one design-planes/design-space to be reflected to other design-planes/design-spaces. For example, the present invention allows a designer to be notified of possible consequences of changes in placement positions in relation to changes from two-dimensional and three-dimensional design/plane space. The '490 apparatus does not teach or suggest managing relations that exist between 2-dimensional data and 3-dimensional data of a component.

Further, because the present invention manages "... reference between models configured by a two-dimensional design plane and a three-dimensional design space for the same target", reference information, such as hierarchical reference, that is configured in the 2-dimensional design plane is reflected in the 3-dimensional design plane (see, claims 20 and 23, FIG. 5 and FIG. 6 of the present application) upon creation of a 3-dimensional model. This allows consistency between the reference information of the 2-dimensional design plane and the 3-dimensional design plane to be maintained. This is not taught or suggested by '490 that is limited to shape information of the 2-dimensional shape data and the 3-dimensional shape data.

It is submitted that the independent claims are patentable over '490.

For at least the above-mentioned reasons, claims depending from independent claims 20 and 23 are patentably distinguishable over '490. The dependent claims are also independently patentable. For example, as recited in claim 21, correspondence between the two-dimensional and three-dimensional design space/place is "a spatial attribute of each two-dimensional design plane in a model". The '490 method does not teach or suggest providing "a managing correspondence between two-dimensional and three-dimensional designs where the correspondence is "spatial attribute of each two-dimensional design plane in a model".

Therefore, withdrawal of the rejection is respectfully requested.

CONCLUSION:

In accordance with the foregoing, claims 1-19 remain allowed, claims 20 and 23 have been amended and claims 20-24 are now allowable. Thus, claims 1-24 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

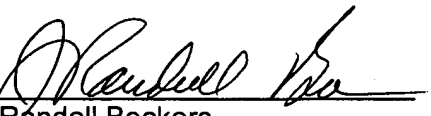
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 9/2/4

By: 

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AMENDMENTS TO THE DRAWINGS:

The attached drawing includes changes to FIG. 1. The sheet containing FIG. 1 replaces the original sheet of FIG. 1.

For the convenience of the Examiner, an annotated sheet showing the changes made is attached. Approval of these changes to FIG. 1 is respectfully requested.

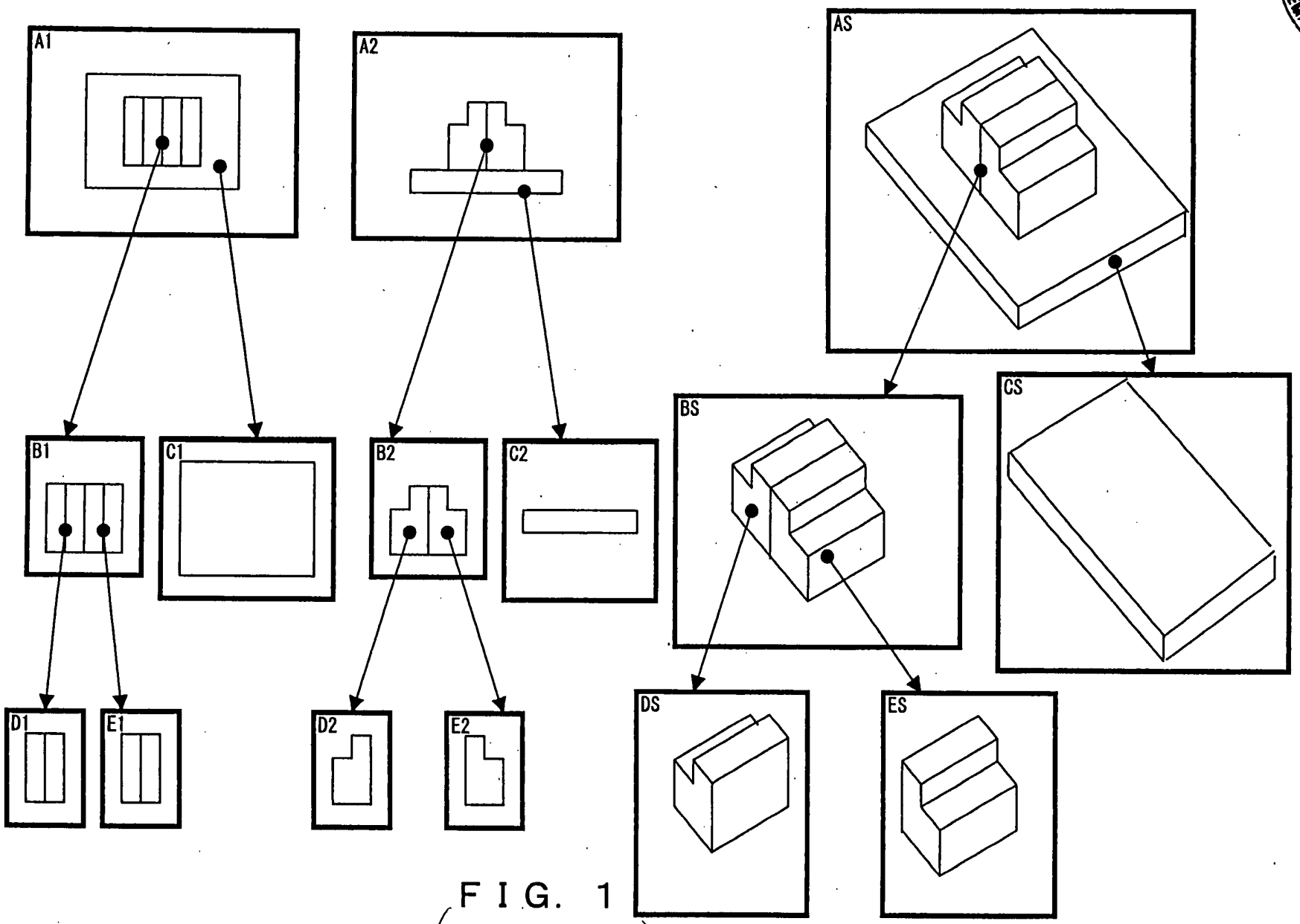

FIG. 1
(PRIOR ART)